

# PRODUCT DATASHEET HQL LED 5400 lm 46 W/2700 K E40

HQL LED PRO | LED replacement for HID lamps for outdoor application



### Areas of application

- Streets
- Area lighting
- Pedestrian zones
- Parks
- Outdoor applications only in suitable luminaires

### Product benefits

- Saves up to 78 % energy when used as replacement for mercury vapor lamps (HQL)
- Low maintenance costs thanks to long lifetime
- Instant 100 % light, no warm-up time

### **Product features**

- Replacement for HQL: Suitable for operation with conventional control gear (CCG) for HQL or 230 V mains
- Replacement for other HID: Suitable for operation with line voltage without control gear
- Power factor: 0.9
- Type of protection: IP65
- High surge protection: up to 6 kV (L-N)





## TECHNICAL DATA

## Electrical data

| Nominal wattage  | 46 W                                |
|--|-------------------------------------|
| Construction wattage                                     | 46.00 W                             |
| Nominal voltage  | 220240 V                            |
| Operating mode   | AC, Conventional control gear (CCG) |
| Claimed equiv. conventional lamp power                   | 125 W                               |
| Nominal current  | 210 mA                              |
| Type of current  | AC                                  |
| Inrush current   | 3.6 A                               |
| Operating frequency                                      | 50/60 Hz                            |
| Mains frequency  | 50/60 Hz                            |
| Max. lamp number on MCB B10 A                            | 23                                  |
| Max. lamp number on MCB B10 A - CCG without compensation | 23                                  |
| Max. lamp number on MCB B10 A - CCG with compensation    | 28                                  |
| Max. lamp number on MCB B16 A                            | 36                                  |
| Max. lamp number on MCB B16 A - CCG without compensation | 36                                  |
| Max. lamp number on MCB B16 A - CCG with compensation    | 43                                  |
| Total harmonic distortion                                | 20 %                                |
| Power factor $\lambda$                                   | 0.90                                |

# Photometrical data

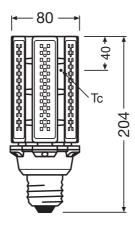
| Luminous flux                           | 5400 lm    |
|---|------------|
| Nominal useful luminous flux 90°        | 5400 lm    |
| Luminous efficacy                       | 117 lm/W   |
| Lumen main.fact.at end of nom.life time | 0.70       |
| Light color (designation)               | Warm White |
| Color temperature                       | 2700 K     |
| Color rendering index Ra                | ≥80        |
| Light color                             | 827        |
| Standard deviation of color matching    | ≤6 sdcm    |
| Rated LLMF at 6,000 h                   | 0.80       |

# Light technical data

|--|

| Warm-up time (60 %) | < 0.50 s |
|---------------------|----------|
| Starting time       | < 0.5 s  |

# Dimensions & Weight



| Overall length   | 204.00 mm |
|------------------|-----------|
| Diameter         | 80,0 mm   |
| Maximum diameter | 80 mm     |
| Product weight   | 690.00 g  |

# Temperatures & operating conditions

| Ambient temperature range            | -20+50 °C |
|--------------------------------------|-----------|
| Maximum temperature at tc test point | 89 °C     |

# Lifespan

| Number of switching cycles                   | 100000 |
|--|--------|
| Lumen maintenance at end of service lifetime | 0.70   |
| Rated lamp survival factor at 6,000 h        | ≥ 0.90 |

## Additional product data

| Base (standard designation) | E40    |
|-----------------------------|--------|
| Mercury content             | 0.0 mg |
| Mercury-free                | Yes    |
| Design / version            | Clear  |

# Capabilities

| Dimmable | No |
|----------|----|
|          |    |

### Certificates & Standards

| Energy efficiency class                      | A+ <sup>1)</sup> |
|--|------------------|
| Energy consumption                           | 46.00 kWh/1000h  |
| Type of protection                           | IP65             |
| Standards                                    | CE               |
| Photobiological safety group acc. to EN62778 | RG1              |

<sup>1)</sup> Energy efficiency class (EEC) on a scale of A++ (highest efficiency) to E (lowest efficiency)

### Country-specific categorizations

| Order relerence  | TQLLED3400 40W/ |
|------------------|-----------------|
|                  |                 |
| I OCICTICAL DATA |                 |

### LOGISTICAL DATA

| Temperature range at storage | -20+80 °C |
|------------------------------|-----------|
|------------------------------|-----------|

### Energy labelling regulation data acc EU 2019/2015

| Light source cap-type (or other electric interface) | E40       |
|---|-----------|
| Length  | 204.00 mm |
| Height  | 80,0 mm   |
| Width   | 80,0 mm   |

### Safety advice

- The bulb may be larger and heavier than the replaced bulb. Before installation it must be checked, if the luminaire and especially the holder is capable of carrying the weight of the lamp. If possible, please install the safety rope included in the package containing the lamp for the types 90 W lamps.
- Not suitable for operation with ignitors.
- Operation on the capacitor can lead to a reduction of the power factor of the system.
- When installed horizontally, the  $t_{\rm C}$  point of the lamp is located on the top side of the lamp.
- Use in tight luminaires and luminaires with tight reflectors not recommended.
- All electrical connections must be made by a qualified person.

### **DOWNLOAD DATA**

|     | Documents and certificates Document name |                                  |
|-----|--|----------------------------------|
| POF | User instruction / safety instructions   | HQL LED PRO                      |
| POF | Declarations of conformity               | CE Declaration of Conformity HQL |

| Photometric and lighting design files | Document name                            |
|---------------------------------------|--|
| IES file (IES)                        | AC21055_HQLLED5400 46W 230V PROE40       |
| LDT file (Eulumdat)                   | AC21055_HQLLED5400 46W 230V PROE40       |
| Light distribution curve type polar   | HQLLED5400 46W 827 230V PRO E40 FS1OSRAM |

### LOGISTICAL DATA

| Product code  | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume                |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4058075124967 | Folding box<br>1             | 87 mm x 87 mm x 231 mm               | 763.00 g     | 1.75 dm <sup>3</sup>  |
| 4058075124974 | Shipping box<br>6            | 270 mm x 185 mm x 256 mm             | 4866.00 g    | 12.79 dm <sup>3</sup> |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

### **DISCLAIMER**

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.